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Dose Consolidation

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In 2003, healthcare costs grew 7.7 percent in the United States to $1.7 trillion or 15.3% of the gross domestic product in 2003. This number is expected to exceed $3.6 trillion by 2014.[1] Prescription drug costs accounted for 11% of the 2003 healthcare costs. While growth in prescription drug expenditure has slowed since 2000, it is still the fastest growing sector in healthcare expenditures.[1] Prescription drug costs for Kansas Medical Assistance Program (KMAP) grew by 13.7% in calendar year 2005.[2]

Pharmaceutical cost growth is based on a number of factors: 1) growing prevalence of identified and treated disease, 2) aging of the population, 3) increasing quantities of medications per patient, 4) introduction of new, costly therapeutic agents to the market, and 5) increasing drug prices or inflation.[3] Although many physicians may not be familiar with the prices of medications, most are willing to consider costs when prescribing.[4,5]

Consolidating drug doses provides a method of controlling pharmaceutical expenditures and improving patient compliance. The table below illustrates some dose consolidation opportunities recently identified in the KMAP. In addition, for those patients with consolidation opportunities, non-adherence was evaluated. Where identified, nonadherence opportunities are also included.

Selected Dose Consolidation Opportunities in KMAP and Yearly Savings Potential

Drug	# of Patients with Dose Consolidation Opportunities	Annualized Savings Potential Per Drug *	# of Patients Identified as Non-adherent
Risperdal	1,254	**$662,112 - $1,685,376**	120
Lisinopril	397	**$47,640 - $80,988**	57
Abilify	329	**$59,549 - $118,769**	42
Zyprexa	264	**$3,168 - $535,392**	26
Effexor XR	137	**$161,112 - $177,552**	18
Cozaar	113	**$56,952 - $85,428**	8
Prevacid	94	**$163,560**	**
Lexapro	83	**$69,720 - $83,664**	14
Paxil	72	**$60,480**	16

*Based on average wholesale price obtained from FirstDataBank April 24, 2006. The savings listed depends upon the strength of tablet prescribed.
** Not measured

Optimizing drug therapy by consolidating doses improves patient compliance and decreases pharmaceutical expenditures.[6,7] By identifying those patients prescribed multiple dosing units per day when a single dose equaling the current total daily dose is available, a lower cost dose may be prescribed. For example, a patient prescribed two 10mg atorvastatin tablets per day could take one 20mg tablet per day. Dose consolidation may in turn decrease the dosing frequency and/or dosage units that a patient is currently taking on a daily basis resulting in improved medication adherence and decreased pharmacy expenditures.

Medication non-adherence can also result in increased expenditures. On an annual basis, about 50% of prescribed medications are taken incorrectly with associated costs of $100 billion annually.[8] Factors such as dosing frequency influence medication adherence and simplifying a patient's prescribed medication regimen is a well-recognized method to increase medication adherence. Once and twice daily dosing regimens have a much higher adherence rate than three or four times daily dosing regimens.[9]

Quick Facts About Dose Consolidation [1,5-9]	
• Medication adherence decreases as dosing frequency increases. • QID dosing – 39% adherence • QD dosing – 87% compliance • Drug regimen simplification improves medication adherence.	• Most physicians are not aware of specific medication costs, but feel it would be helpful to have this information. • Example: • 2 x 10mg tabs per day = $62/month • 1 x 20mg tabs per day = $31/month

References:

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